

FREQUENCY HOPPING SPREAD SPECTRUM SCHEME FOR RFID READER

ABSTRACT

A system and method is provided for implementing forced frequency "hops" if the time it takes to perform a particular transaction is greater than the time available on a particular carrier frequency. In one embodiment of the present invention, a radio frequency identification (RFID) base station processor (in conjunction with program information stored in a base station memory) is adapted to (i) determine the amount of time available on a particular carrier frequency (e.g., pursuant to Federal Communications Commission (FCC) regulations, European Telecommunications Standardization Institute (ETSI) regulations, etc.), (ii) determine the amount of time it would take to perform a particular transaction, and (iii) force the base station to "hop" to another carrier frequency if the transaction time is longer than the available time. In one embodiment of the present invention, the time it would take to perform a particular transaction is the time it would take to perform the next transaction. In another embodiment of the present invention, the time it would take to perform a particular transaction is the time it would take to perform the longest (or "worst-case") transaction. In alternate embodiments of the present invention, a transaction is defined as the transmission of information (e.g., data, commands, etc.) or both the transmission of information and the reception of related information.